

WHAT IS CLAIMED IS:

1. An image processing apparatus for extracting an object in an image, comprising;

image obtaining means for obtaining image data of a specified image;

motion analyzing means for analyzing the motion of an object included in the image on the basis of the image data obtained by the image obtaining means;

image presenting means for presenting an image in a frame in which the object to be extracted from the image is specified;

contour input accepting means for accepting the input of the contour of the object to be extracted from the image in the frame, which is presented by the image presenting means, on the basis of the analysis result obtained by the motion analyzing means; and

object extracting means for extracting the object in images in a plurality of frames on the basis of the contour of the object, the input of which is accepted by the contour input accepting means.

2. An image processing apparatus according to claim 1, wherein the motion analyzing means includes:

motion computing means for computing the motion of the

object in the image relative to the background; and

area determining means for determining an extraction area in which the contour of the object in the image is to be extracted on the basis of the motion computed by the motion computing means,

wherein the contour input accepting means accepts the contour input in the extraction area determined by the area determining means.

3. An image processing apparatus according to claim 2, wherein the image presenting means displays the extraction area determined by the area determining means.

4. An image processing apparatus according to claim 2, wherein the motion computing means includes distance computing means for setting a plurality of feature points in the image and computing the distance between the adjacent feature points.

5. An image processing apparatus according to claim 4, wherein the area determining means includes:

comparison means for comparing the distance between the adjacent feature points in a temporally prior frame with the distance between the adjacent feature points in a temporally subsequent frame, the distances being computed by the motion

computing means; and

setting means for setting, on the basis of the comparison result obtained by the comparison means, in the background of the image, a first area that is gradually covered by the object and a second area that gradually changes from being covered to being non-covered by the object.

6. An image processing apparatus according to claim 5, wherein the object extracting means extracts the object in a plurality of frames temporally subsequent to the frame in which the input of the contour of the object is accepted by the contour input accepting means, and

the image presenting means displays the first area serving as the extraction area.

7. An image processing apparatus according to claim 5, wherein the object extracting means extracts the object in a plurality of frames temporally prior to the frame in which the input of the contour of the object is accepted by the contour input accepting means, and

the image presenting means displays the second area serving as the extraction area.

8. An image processing apparatus according to claim 1,

further comprising object displaying means for displaying the object extracted by the object extracting means.

9. An image processing method for extracting an object in an image, comprising steps of;

obtaining image data of a specified image;

analyzing the motion of an object included in the image on the basis of the image data obtained in the image obtaining step;

presenting an image in a frame in which the object to be extracted from the image is specified;

accepting the input of the contour of the object to be extracted from the image in the frame, which is presented in the image presenting step, on the basis of the result obtained in the motion analyzing step; and

extracting the object in images in a plurality of frames on the basis of the contour of the object, the input of which is accepted in the contour input accepting step.

10. A computer-executable program comprising steps of: controlling the obtaining of image data of a specified image;

controlling analysis of the motion of an object included in the image on the basis of the image data obtained in the image obtaining control step;

controlling the presenting of an image in a frame in which the object to be extracted from the image is specified;

controlling the accepting of the input of the contour of the object to be extracted from the image in the frame, which is presented in the image presenting control step, on the basis of the result obtained in the motion analysis control step; and

controlling extraction of the object in images in a plurality of frames on the basis of the contour of the object, the input of which is accepted in the contour input accepting control step.

11. A recording medium having a computer-executable program recorded thereon, the program comprising steps of:

controlling the obtaining of image data of a specified image;

controlling analysis of the motion of an object included in the image on the basis of the image data obtained in the image obtaining control step;

controlling the presenting of an image in a frame in which the object to be extracted from the image is specified;

controlling the accepting of the input of the contour of the object to be extracted from the image in the frame,

which is presented in the image presenting control step, on the basis of the result obtained in the motion analysis control step; and

controlling extraction of the object in images in a plurality of frames on the basis of the contour of the object, the input of which is accepted in the contour input accepting control step.